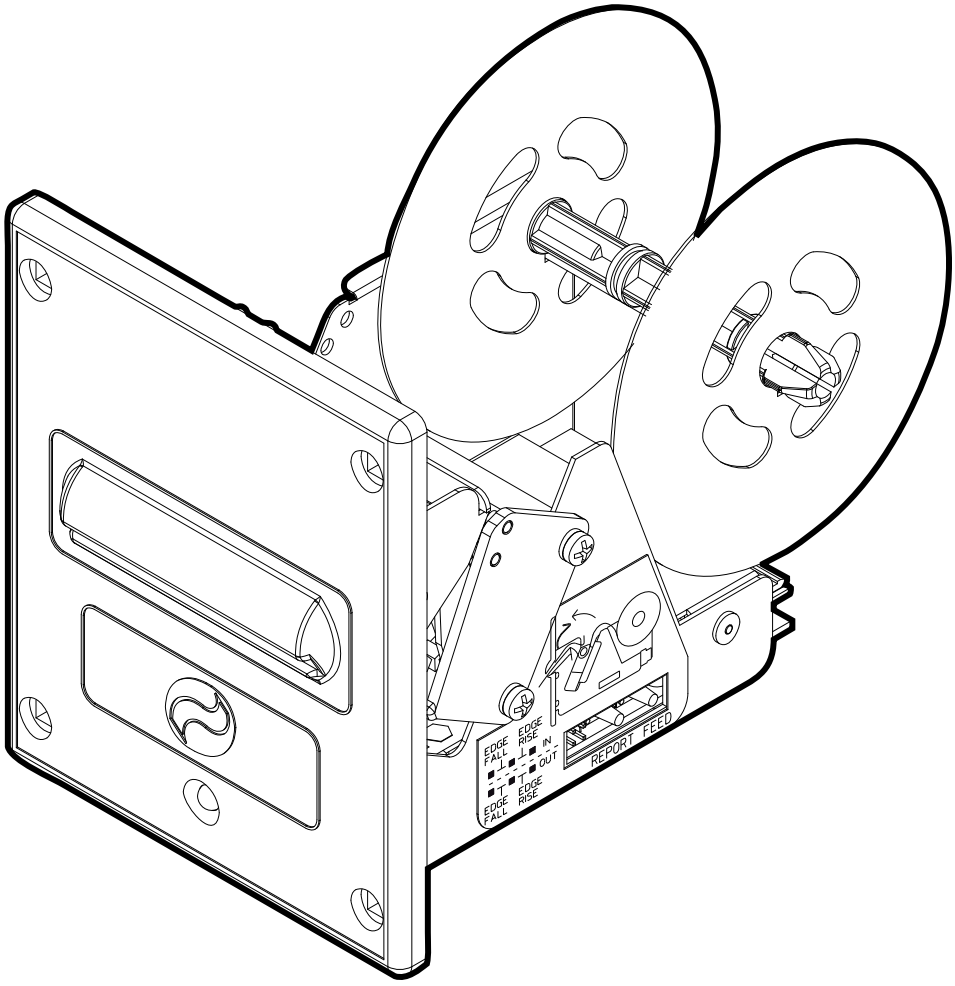
TG 02

USER MANUAL

OEM



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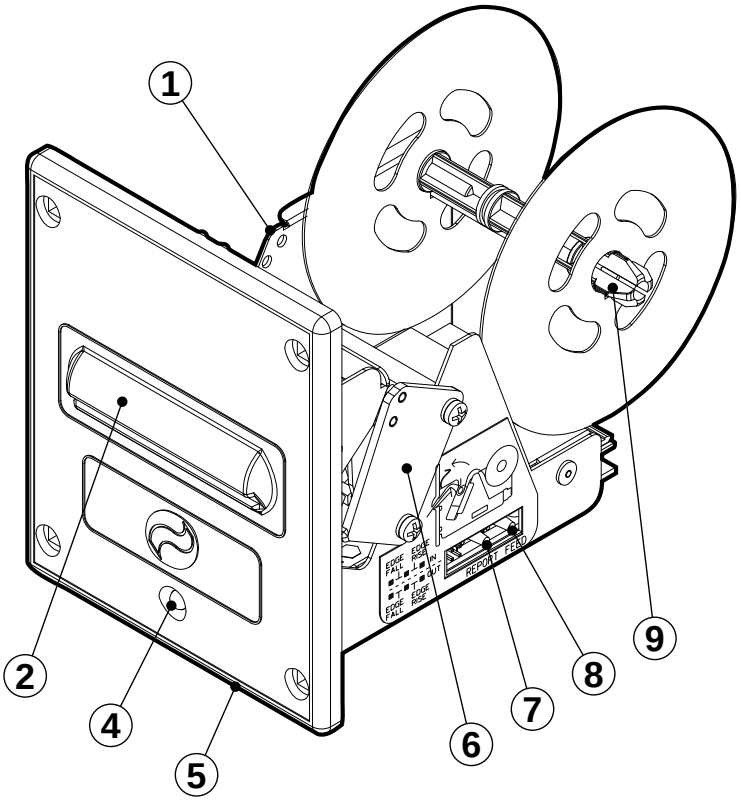
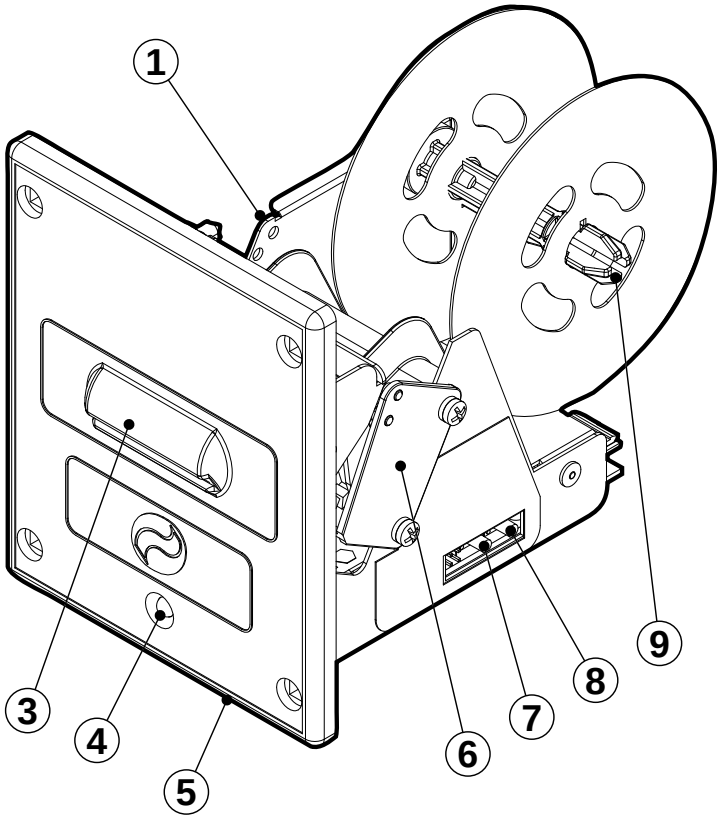
PRINTER COMPONENTS

A. TG02 exterior front view

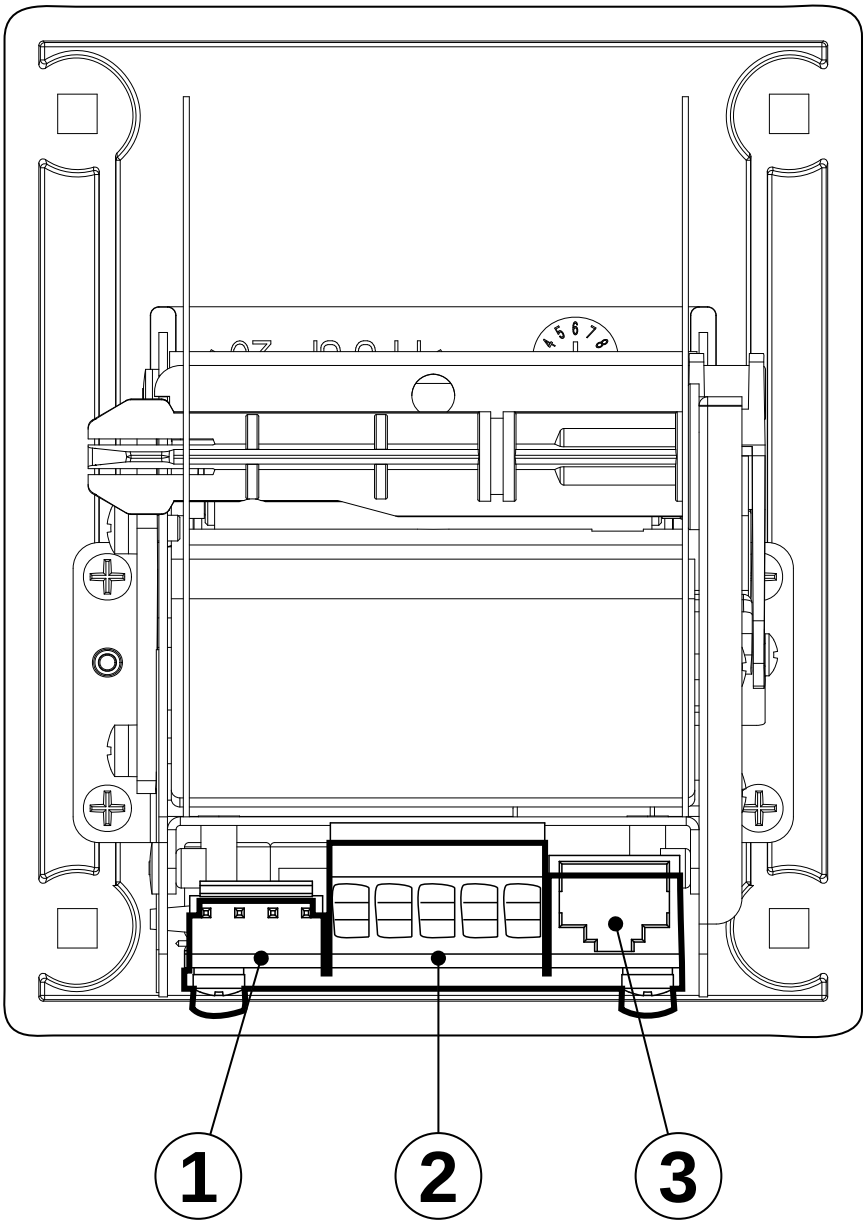
1- Case
2- Paper output for 58mm model
3- Paper output for 35mm model
4- Led
5- Front panel
6- Printing mechanism
7- “REPORT” Key
8- “FEED” Key
9- Paper roll support





B. TG02 - external rear view

1- Power supply connector
2- Power supply connector and additional signals
3- RS232/TTL serial interface connector



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MANUAL CONTENTS

In addition to the Introduction which includes a description of the explanatory notes used in the manual, general safety information, how to unpack the printer and a brief description of the printer including its basic features, this manual is organized as follows:

Chapter 1: Contains the information required for correct printer installation and its proper use
Chapter 2: Contains information on interface specifications
Chapter 3: Contains a description of the printer command set
Chapter 4: Contains Technical Specifications of the printer
Appendix: Contains a description of printer accessories and spare parts.

EXPLANATORY NOTES USED IN THIS MANUAL

N.B.
Gives important information or suggestions relative to the use of the printer.

WARNING
Information marked with this symbol must be carefully followed to guard against damaging the printer.

DANGER
Information marked with this symbol must be carefully followed to guard against operator injury or damage.

GENERAL SAFETY INFORMATION

- Read and keep the instructions which follow.
- Follow all warnings and instructions indicated on the printer.
- Before cleaning the printer, disconnect the power supply.
- Clean the printer with a damp cloth. Do not use liquid or spray products.
- Do not operate the printer near water.
- Do not use the printer on unstable surfaces that might cause it to fall and be seriously damaged.
- Only use the printer on hard surfaces and in environments that guarantee proper ventilation.
- Use the type of electrical power supply indicated on the printer label. If in doubt, contact your retailer.
- Do not block the ventilation openings.
- Do not introduce foreign objects of any kind into the printer as this could cause a short circuit or damage parts that could jeopardize printer functioning.
- Do not spill liquids onto the printer.
- Do not carry out technical operations on the printer, with the exception of the scheduled maintenance procedures specifically indicated in the user manual.
- Disconnect the printer from the electricity supply and have it repaired by a specialized technician when:
  - A. The feed connector has been damaged.
  - B. Liquid has seeped inside the printer.
  - C. The printer has been exposed to rain or water.
  - D. The printer is not functioning normally despite the fact that all instructions in the users ma nual have been followed.
  - E. The printer has been dropped and its outer casing damaged.
  - F. Printer performance is poor.
  - G. The printer is not functioning.

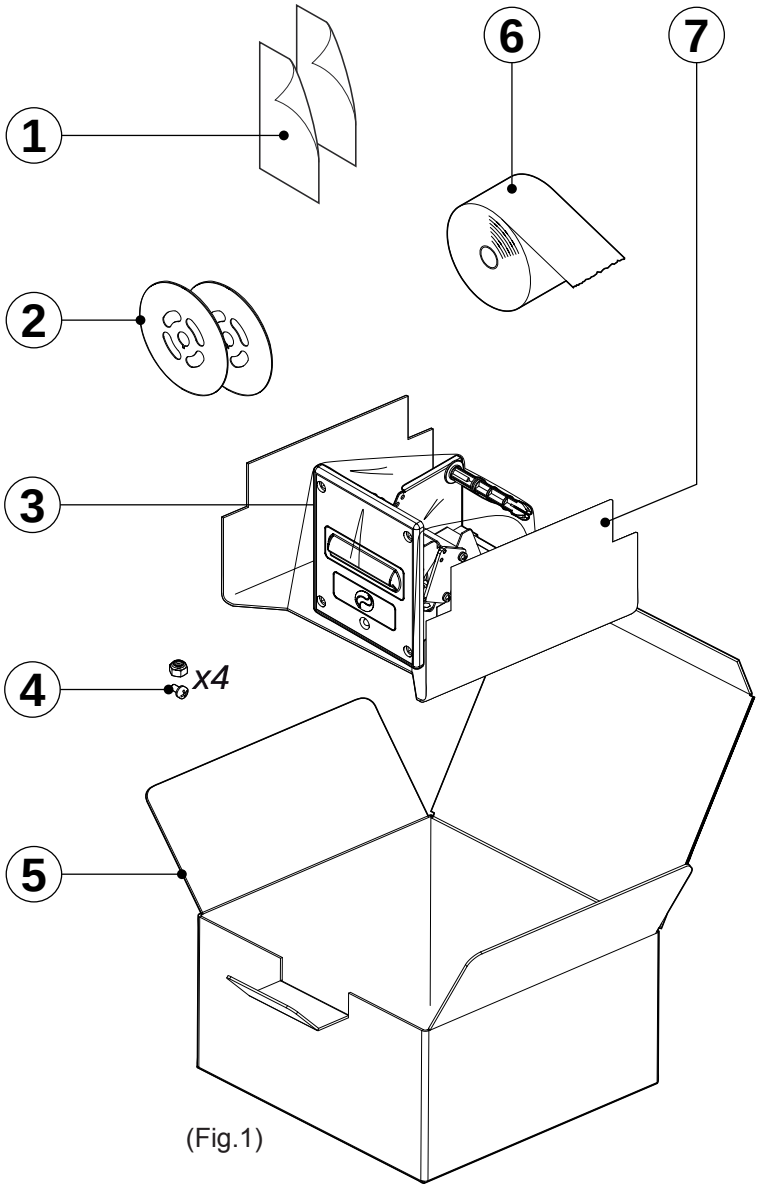
UNPACKING THE PRINTER

Remove the printer from the carton, taking care not to damage the packing materials which should be retained for future shipping/moving.
Make sure all components listed below are present and not damaged. If any part is missing and/or damaged, contact customer service.

1. Installation instructions
2. Control discs
3. Printer
4. N°4 screws + n°4 Self-locking nut
5. Box
6. Paper roll
7. Foam packing shell

NOTE
The figures , where is not specified, indicates the model with 58mm paper width, because the informations are the same for 35mm paper width too if don't change.

- Open the printer packaging
- Take out the paper roll
- Take out the control discs
- Remove the installation instruction
- Take out the foam packing shell
- Take out the printer
- Keep the box, trays and packing materials in the event the printer must be transported/shipped in the future.



(Fig.1)

MAIN CHARACTERISTICS

The TG02 printer is the ideal solution for:
- Gaming machines
- Economical kiosks
- Self-service machines
- Vending machines

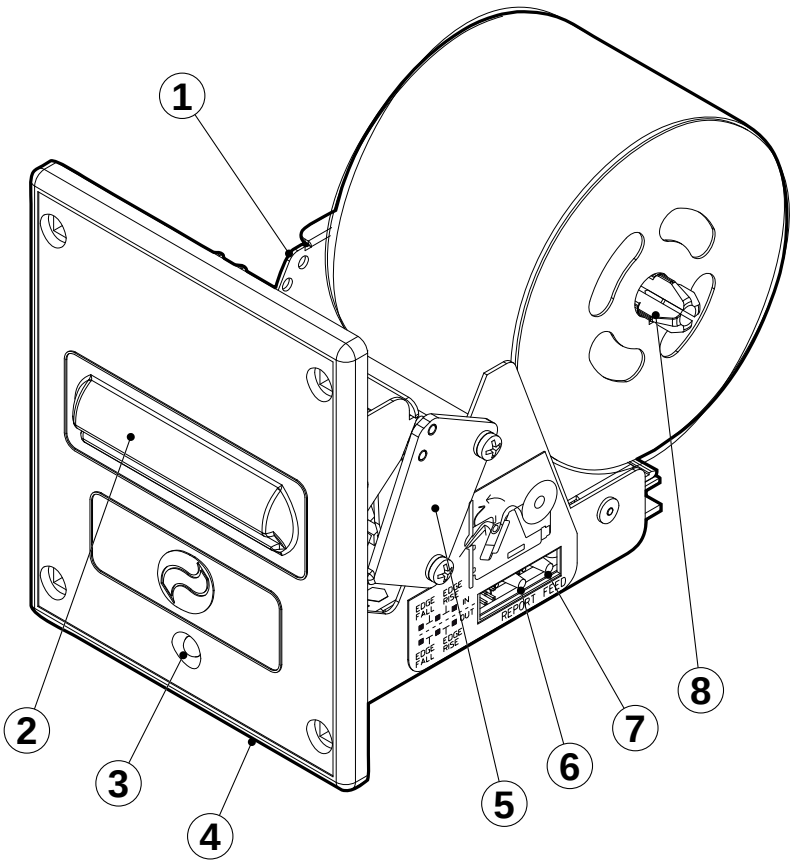
is equipped with paper tear-off and anti-paper jam system and it is easy to install and to fasten on panel thanks to fireproof and shock resistant plastic frontal.

PRINTER DESCRIPTION

It is equipped with a 200 dpi thermal print mechanism that uses paper with a width of 57 mm; it has a TTL serial interface (optional RS232 cable) and is also equipped with a calendar clock (Real Time Clock).

The TG02 printer consists of a case (1) onto which the following components are fitted: thermal print mechanism (5), paper roll pin (8) front panel (4) in PPO for installation on Gaming/Vending Machines.

- When the “REPORT” key (6) is pressed, it prints the printer operational report.
- When the “FEED” key (7) is pressed, the paper can be fed forward manually.
- The red Status LED (3) displays a printer hardware error status. The check is carried out “on line”, i.e. in the event of a mal-functioning, the LED will starts flashing as follows:



(Tab.1)

Status led	Description
Always OFF	Printer OFF
Always ON	Printer ON – no faults
Slow flashing (on for a long period)	Tilting cover raised
Slow flashing (on for a short period)	Paper Out Message

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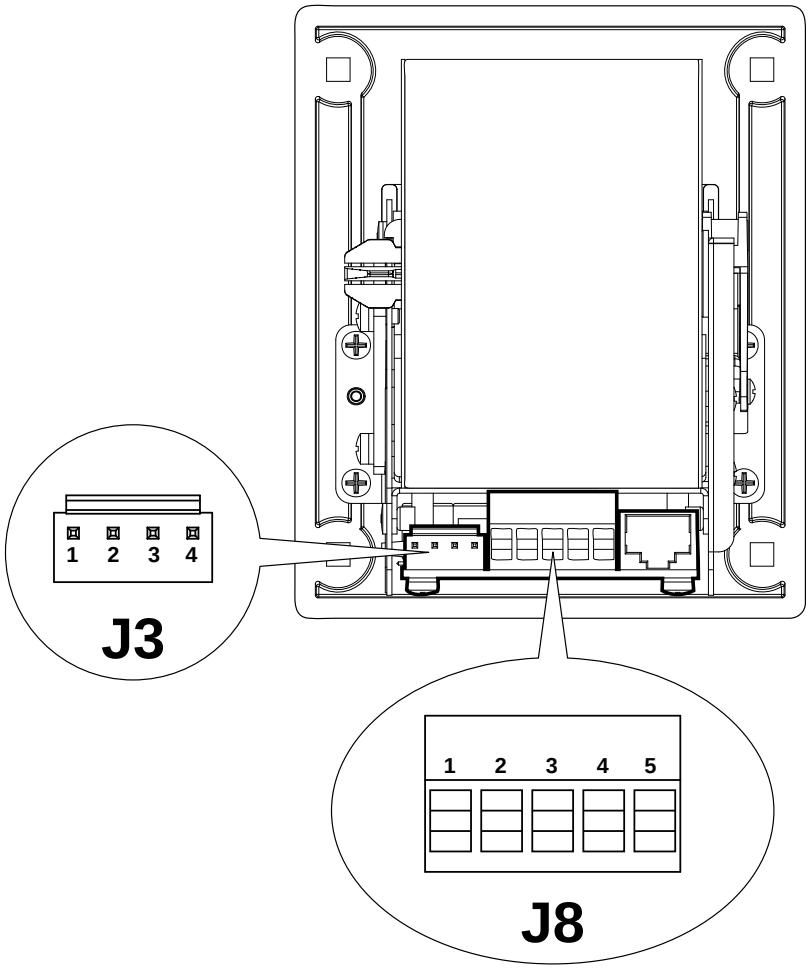
1.1 CONNECTIONS

(Fig.1.1)



1.1.1 Power supply and Input/Output

As regards the power supply, the printer TG02 is equipped with a Ticket Outlet-compatible 4-pin male connector (J3). The signals on the pins of the feed connector are as follows:

(Tab.1.1)

PIN	SIGNAL	< IN / OUT >	DESCRIPTION
1	N.C.	-	Not connected
2	+ 12 V	POWER	POWER
3	GND	POWER	POWER
4	N.C.	-	Not connected

WARNING
Be sure to observe the correct polarity for the power supply.

As regards the power supply and additional signals, the TG02 printer is equipped with a 5-pin screw terminal connector (J8). The signals on the connector pins are as follows:

(Tab.1.2)

PIN	SIGNAL	< IN / OUT >	DESCRIPTION
1	+12 V	POWER	POWER
2	gnd	POWER	POWER
3	AUXILIARY input a	IN (O.C.)	OPEN COLLECTOR
4	AUXILIARY input b	IN (O.C.)	OPEN COLLECTOR
5	AUXILIARY OUTPUT	OUT (O.C.)	OPEN COLLECTOR

1.2 SETUP

The printer enables the configuration of the printer default parameters. The parameters affected during configuration are:

- **Baud Rate:** 38400, 19200, 9600 [D], 4800, 2400, 1200.
- **Data Length:** 7, 8 [D] bits/char.
- **Parity:** None [D], even or odd.
- **Handshaking:** XON/XOFF [D] or Hardware.
- **Paper jam sensor:** Enabled [D], Disabled.
- **Speed/Current:** Low [D], Normal, High.
- **Print Density:** Very light, Light, Normal [D], Dark, Very dark, Double copy

PRINTER SET-UP

Baud Rate ..... : **9600 bps**
Data Length ..... : **8 bits/chr**
Parity ..... : **None**
Handshaking ..... : **Xon/Xoff**
Paper jam sensor : Ena**bled**
Speed / Current ... : **High**
Print Density ..... : **Normal**

[FEED] Enter Set-Up
[REPORT] Exit Set-Up

(Fig.1.2)

[D] NOTE
The parameters indicates with this symbol are the default values.

1.2.1 Configuration of REPORT and FEED keys

If, when the printer is switched on, both of the above-mentioned keys are held down, the printer enters configuration mode and prints the first modifiable parameter. At this point, each time the REPORT key is pressed, the parameter changes and its current value is printed. Once the desired value has been obtained, press the FEED key to proceed to the next parameter, and so on. Once all the parameters have been run through, the printing of a message signals the end of setting procedure.

1.3 AUTOTEST

To run the autotest, press the FEED key while switching on the printer. During the running of the autotest, the character fonts and logos stored inside the printer are printed.

1.4 CAUTIONS

WARNINGS

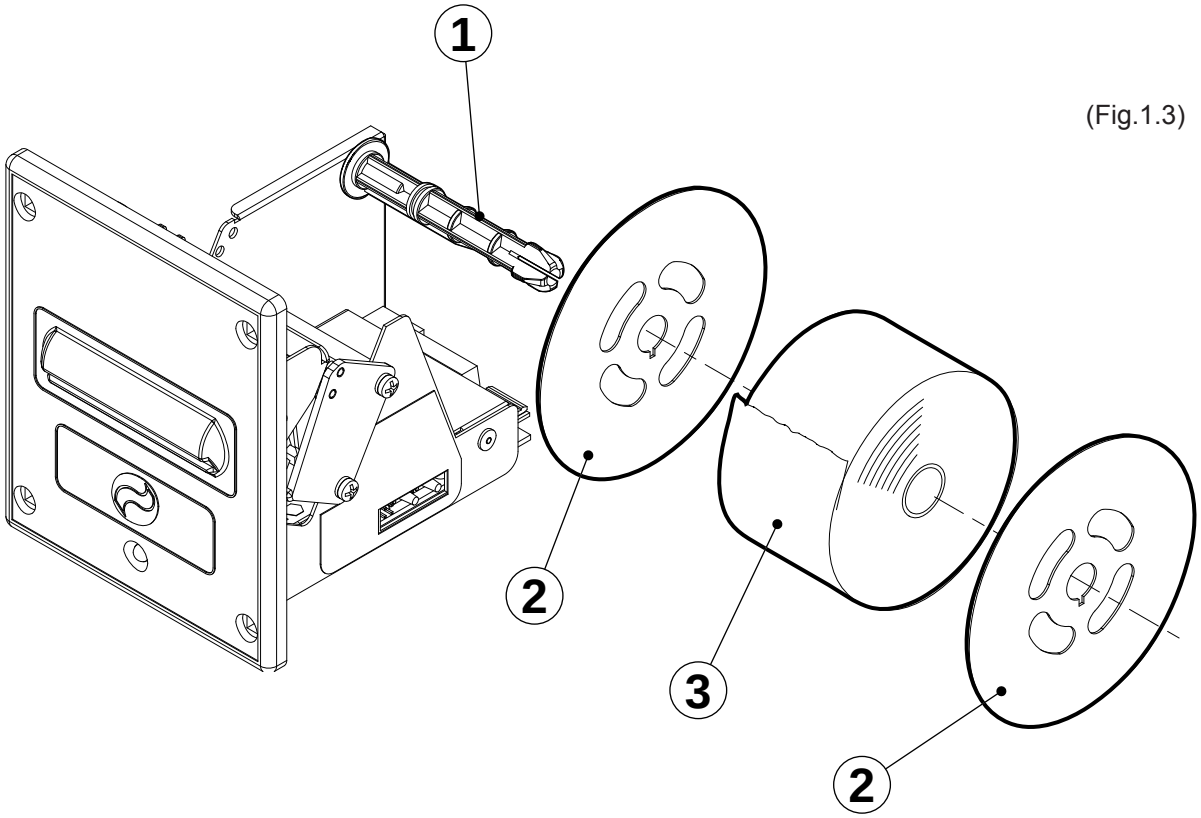
- Do not print without paper.
- Do not drag the carriage manually when the printer is on.
- Do not allow any foreign bodies to become trapped inside the printer.
- Safeguard all parts of the printer from blows, both during and subsequent to installation.

1.5 MAINTENANCE

1.5.1 Using the control discs

Assembly the control discs with the paper roll as shown in the fig. 1.3.

NOTE
The figures , where is not specified, indicates the model with 58mm paper width, because the informations are the same for 35mm paper width too if don't change.

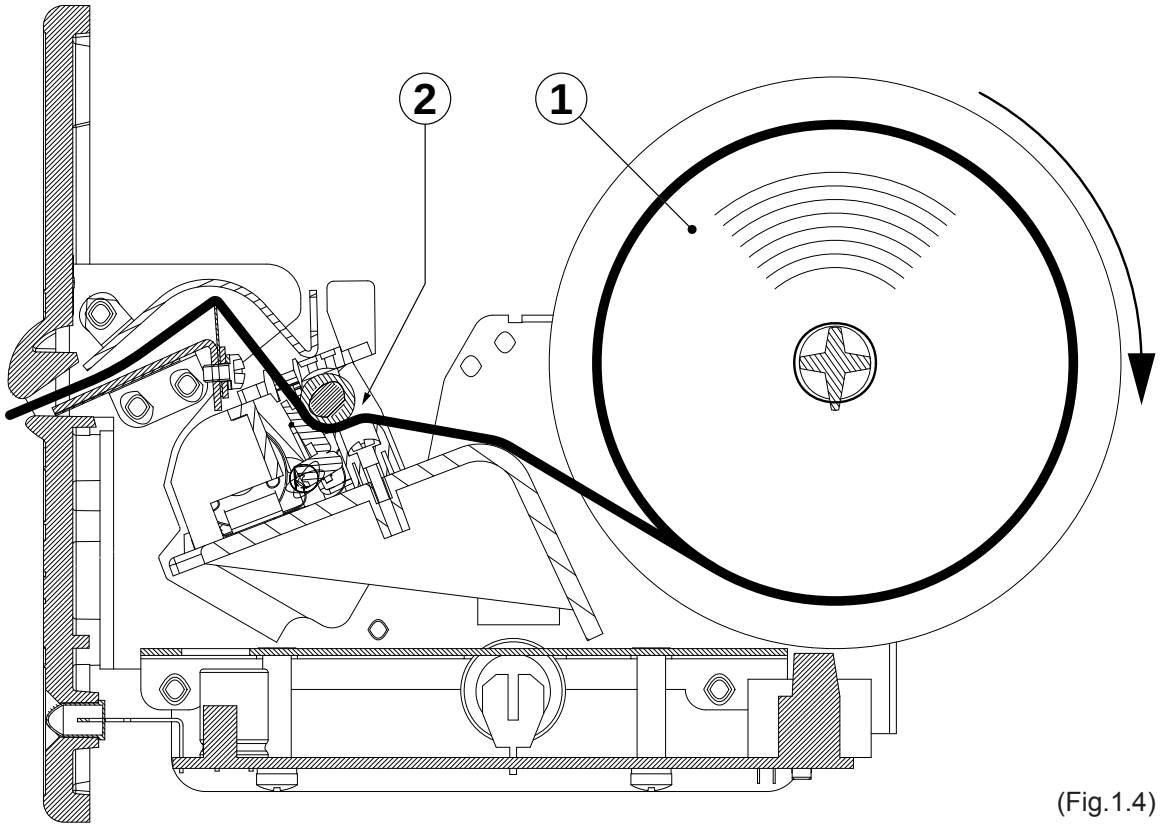


(Fig.1.3)

1.5.2 Changing the paper roll

To change the paper roll in the printer with 58mm paper width, proceed as follows (see fig. 1.4):

1. Position the paper roll (1), so that it rotates in the direction shown (fig.1.4);
2. Insert the end of the paper roll in the print mechanism (2) and wait until the roll loads automatically;
3. Remove the ticket from the mouth paper output.

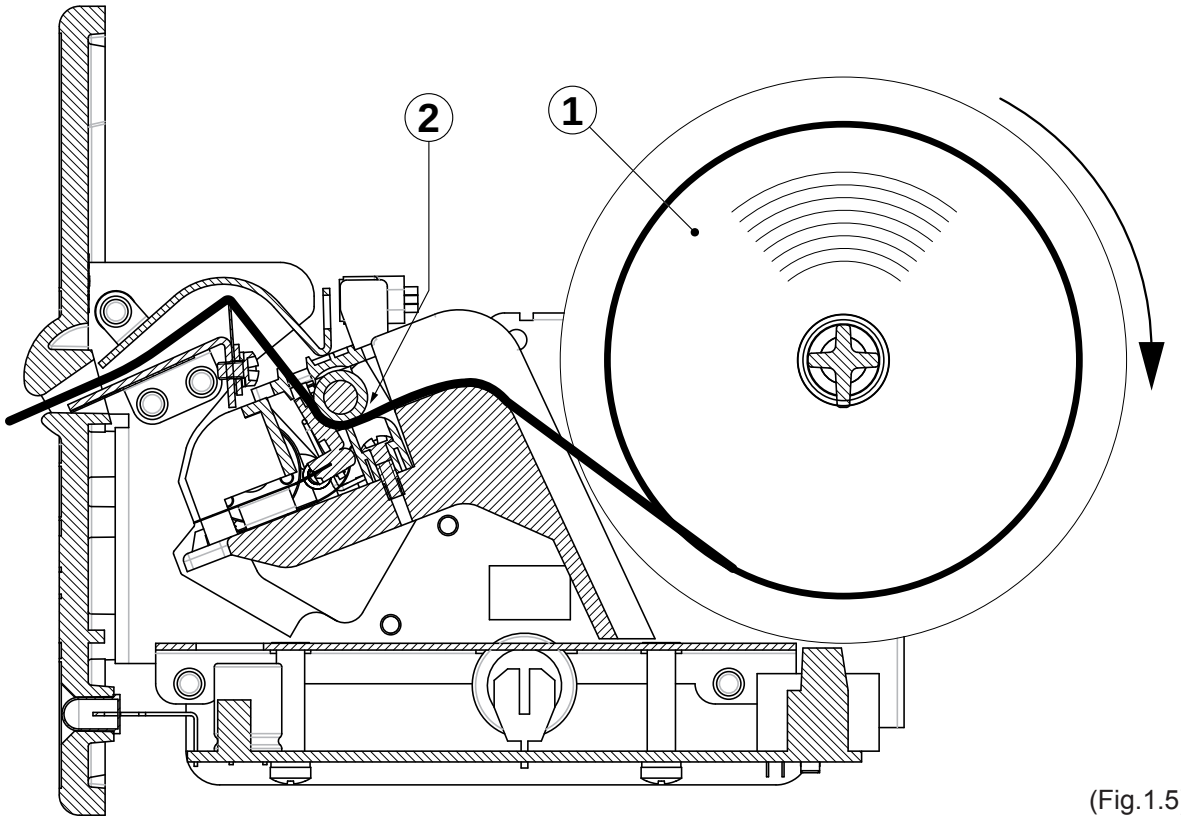


(Fig.1.4)

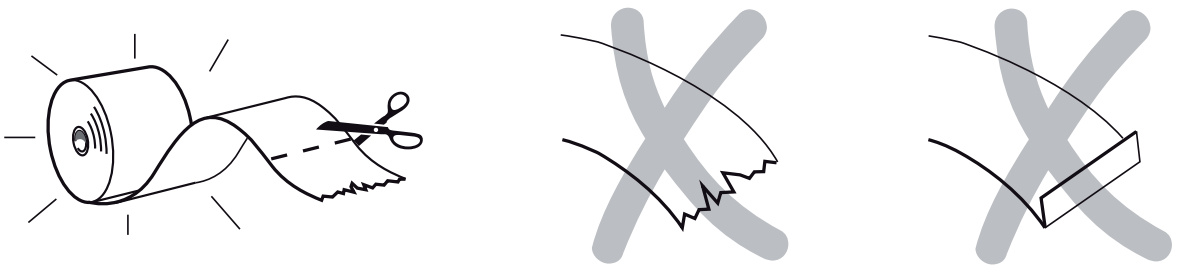
WARNING
Before inserting the paper, ensure that it is cut evenly.

To change the paper roll in the printer with 35mm paper width, proceed as follows (see fig. 1.5):

1. Position the paper roll (1), so that it rotates in the direction shown (fig.1.5);
2. Insert the end of the paper roll in the print mechanism (2) and wait until the roll loads automatically;
3. Remove the ticket from the mouth paper output.



(Fig.1.5)



WARNING
Before inserting the paper, ensure that it is cut evenly.

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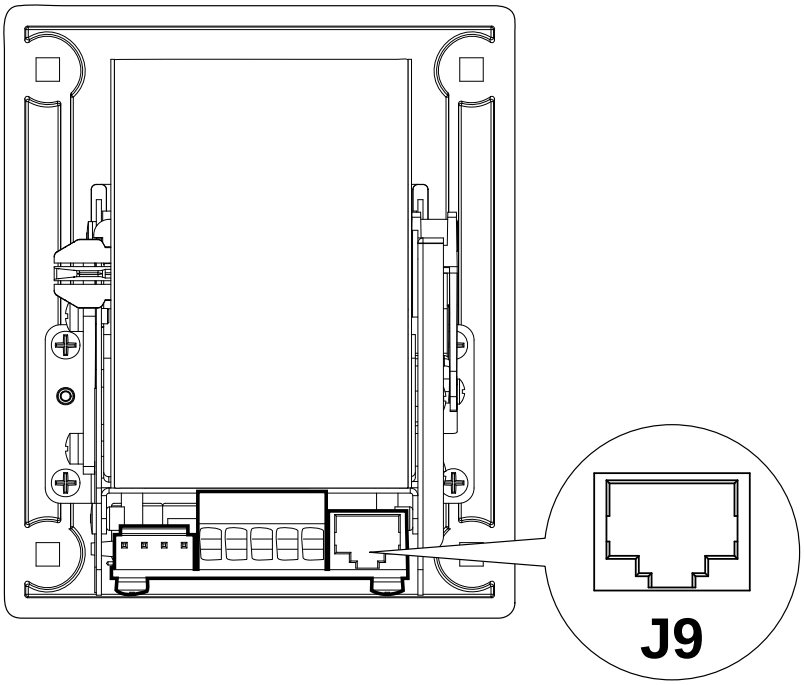
2.1 RS232/TTL SERIAL

(Fig.2.1)



The printer has a RS232/TTL serial interface and is connected by means of a RJ45 connector J9 (see fig. 2.1). In the following table, the signals present on the connector are listed:

(Tab.2.1)

PIN	SIGNAL	IN / OUT	DESCRIPTION
1	VCC	OUT	+ 5V
2	GND	-	GROUND
3	TXD	OUT	DATA TRANSMISSION
4	RXD	IN	DATA RECEPTION
5	RTS	OUT	READY TO SEND
6	+VIN	OUT	+ 12V
7	NC	-	NOT CONNECTED
8	NC	-	NOT CONNECTED

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3.1 COMMAND DESCRIPTIONS

The table 3.1 shows the commands list, ordered by their hexadecimal value.

LEGEND :

Symbol	Function
$	indicates the representation of the command hexadecimal value (for example $40 means HEX 40).
{ }	indicates an ASCII character not performable.
n, m, t, x, y	are optional parameters that can have different values.

3.1.1 ESC/POS Emulation

The following table lists all the commands for function management in ESC/POS Emulation of the printer. The commands can be transmitted to the printer at any moment, but they will only be carried out when the commands ahead of them have been executed. The commands are carried out when the circular buffer is free to do so.

COMMAND DESCRIPTION TABLE

(Tab.3.1)

HEX	ASCII	Description
$08	BS	Back space
$09	HT	Horizontal tab
$0A	LF	Print and line feed
$0D	CR	Print and carriage return
$10 $04 n	DLE EOT n	Real-time status transmission
$18	CAN	Cancel current line transmitted
$1B $20 n	ESC SP n	Set right-side character spacing
$1B $21 n	ESC ! n	Set print mode
$1B $24 nL nH	ESC $ nL nH	Set absolute print position
$1B $28 $76 nL nH	ESC (v nL nH	Set relative vertical print position
$1B $2D n	ESC - n	Turn underline mode on/off
$1B $30	ESC 0	Select 1/8-inch line spacing
$1B $32	ESC 2	Select 1/6-inch line spacing
$1B $33 n	ESC 3 n	Set line spacing using minimum units
$1B $34 n	ESC 4 n	Set/reset italic mode
$1B $3D n	ESC = n	Select device
$1B $40	ESC @	Initialize printer
$1B $44 n1...nk $00	ESC D n1...nk NUL	Set horizontal tab positions
$1B $45 n	ESC E n	Select emphasized mode
$1B $47 n	ESC G n	Select double-strike mode
$1B $4A n	ESC J n	Print and paper feed
$1B $52 n	ESC R n	Select international character set
$1B $57	ESC W	Print a graphic line
$1B $5C nL nH	ESC \ nL nH	Set relative print position
$1B $61 n	ESC a n	Select justification
$1B $64 n	ESC d n	Print and feed paper n lines
$1B $72 n	ESC r n	Set/reset red printing mode
$1B $74 n	ESC t n	Select character code table

$1B $76	ESC v	Transmit paper sensor status
$1B $78 n	ESC x n	Select speed/current mode
$1B $7B n	ESC { n	Set/cancel upside-down character printing
$1B $FA n xH xL yH yL	ESC · n xH xL yH yL	Print logo (384x85 dots)
$1D $21 n	GS ! n	Select character size
$1D $42 n	GS B n	Turn white/black reverse printing mode on/off
$1D $49 n	GS I n	Transmit printer ID
$1D $4C nL nH	GS L nL nH	Set left margin
$1D $50 x y	GS P x y	Set horizontal and vertical motion unit
$1D $57 nL nH	GS W nL nH	Set printing area width
$1D $59 n	GS Y n	Sets height in printing
$1D $5A n	GS Z n	Receive n bytes from serial port
$1D $72 n	GS r n	Transmit status
$1D $7C n	GS | n	Set printing density

Given below are more detailed descriptions of each command.

$08

[Name] **Back space**
[Format] ASCII BS
Hex 08
Decimal 8
[Description] Moves print position to previous character.
[Notes] Can be used to put two characters at the same position.
[Default]
[Reference]
[Example]

$09

[Name] **Horizontal tab**
[Format] ASCII HT
Hex 09
Decimal 9
[Description] Moves the print position to the next horizontal tab position.
[Notes] • Ignored unless the next horizontal tab position has been set.
• If the command is received when the printing position is at the right margin, the printer executes print buffer full printing and horizontal tab processing from the beginning of the next line.
• Horizontal tab positions are set using **$1B $44**.
[Default]
[Reference] **$1B $44**
[Example]

$0A

[Name] **Print and line feed**
[Format] ASCII LF
Hex 0A
Decimal 10

[Description] Prints the data in the buffer and feeds one line based on the current line spacing.
[Notes] • Sets the print position to the beginning of the line.
[Default]
[Reference] **$1B $32, $1B $33**
[Example]

$0D

[Name] **Print and carriage return**
[Format]

ASCII	CR	
Hex	0D	
Decimal	13	

[Description] When autofeed is "**$0D** enabled", this command functions in the same way as **$0A**, other wise it is disregarded.
[Notes] • Sets the print position to the beginning of the line.
[Default] See "Autofeed in setup" parameter.
[Reference] **$0A**
[Example]

$10 $04 n

[Name] **Real-time status transmission**
[Format]

ASCII	DLE	EOT	n
Hex	10	04	n
Decimal	16	4	n

[Range] 1 ≤ n ≤ 4
[Description] Transmits the selected printer status specified by n in real time according to the following parameters:
n = 1 transmit printer status
n = 2 transmit off-line status
n = 3 transmit error status
n = 4 transmit paper roll sensor status
[Notes] • This command is executed when the data buffer is full.
• This status is transmitted whenever data sequence **$10 $04 n** is received. (1 ≤ n ≤ 4).
[Default]
[Reference] See tables below
[Example]

n=1: Printer status

Bit	Off/On	Hex	Decimal	Function
0	-	-	-	RESERVED
1	-	-	-	RESERVED
2	-	-	-	RESERVED
3	Off	00	0	On-line.
	On	08	8	Off-line.
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	Off	00	0	Paper drag motor off
	On	40	64	Paper drag motor on
7	-	-	-	RESERVED

n=2: Off-line status

Bit	Off/On	Hex	Decimal	Function
0	-	-	-	RESERVED
1	-	-	-	RESERVED
2	-	-	-	RESERVED
3	Off	00	0	FEED button not pressed
	On	08	8	FEED button pressed
4	-	-	-	RESERVED
5	Off	00	0	Paper present.
	On	20	32	Paper end.
6	Off	00	0	No error.
	On	40	64	Error.
7	-	-	-	RESERVED

n=3: Error status

Bit	Off/On	Hex	Decimal	Function
0	-	-	-	RESERVED
1	-	-	-	RESERVED
2	-	-	-	RESERVED
3	-	-	-	RESERVED
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	Off	00	0	No auto-recoverable error.
	On	40	64	Auto-recoverable error.
7	-	-	-	RESERVED

n=4: Paper roll sensor status

Bit	Off/On	Hex	Decimal	Function
0	-	-	-	RESERVED
1	-	-	-	RESERVED
2	-	-	-	RESERVED
3	-	-	-	RESERVED
4	-	-	-	RESERVED
5, 6	On	60	96	Fixed to On. The paper end is detected by the sensor.
7	-	-	-	RESERVED

$18

[Name] **Cancel current line transmitted**
[Format] ASCII CAN
Hex 18
Decimal 24

[Description] Deletes current line transmitted.
[Notes] • Sets the print position to the beginning of the line.
[Default]
[Reference]
[Example]

$1B $20 n

[Name] **Set right-side character spacing**
[Format]

ASCII	ESC	SP	n
Hex	1B	20	n
Decimal	27	32	n

[Range] 0 ≤ n ≤ 255
[Description] Sets the character spacing for the right side of the character to [n x horizontal or vertical motion units].
[Notes] • The right character spacing for double-width mode is twice the normal value. When the characters are enlarged, the right side character spacing is m (2 or 4) times the normal va lue.
• The horizontal and vertical motion units are specified by **$1D $50.** Changing the horizontal or vertical motion units does not affect the current right side spacing.
• The **$1D $50** command can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum horizontal movement amount.
• In standard mode, the horizontal motion unit is used.
• The maximum right side spacing is 255/200 inches.
[Default] n = 0
[Reference] **$1D $50**
[Example]

$1B $21 n

[Name] **Select print modes**
[Format]

ASCII	ESC	!	n
Hex 1B	21	n	
Decimal	27	33	n

[Range] 0 ≤ n ≤ 255
[Description] Selects print modes using n (see table below):

Bit	Off/On	Hex	Decimal	Function
0	-	-	-	RESERVED
1	-	-	-	RESERVED
2	-	-	-	RESERVED
3	Off	00	0	Expanded mode not selected.
	On	08	8	Expanded mode selected.
4	Off	00	0	Double-height mode not selected (height=1x).
	On	10	16	Double-height mode selected (height=2x).
5	Off	00	0	Double-width mode not selected (widht=1x).
	On	20	32	Double-width mode selected (widht=2x).
6	Off	00	0	Italic mode not selected.
	On	40	64	Italic mode selected.
7	Off	00	0	Underline mode not selected.
	On	80	128	Underline mode selected.

[Notes] • The printer can underline all characters, but cannot underline the spaces set by **$09, $1B $24, $1B $5C** and 90° rotated characters.
• This command resets the left and right margin at default value (see **$1D $4C, $1D $57**).
• **$1B $45** can also be used to turn the emphasized mode on/off. However, the last-received setting command is the effective one.
• **$1B $2D** can also be used to turn the underlining mode on/off. However, the last-received setting command is the effective one.
• **$1B $34** can also be used to turn the italic mode on/off. However, the last-received setting command is the effective one.
• **$1D $21** can also be used to select character height/width. However, the last-received set ting command is the effective one.

[Default] n = 0

[Reference] **$1B $2D, $1B $45, $1B $34, $1D $21**

[Example]

$1B $24 nL nH

[Name] **Set absolute print position**

[Format]

ASCII	ESC	$	nL	nH	
Hex	1B	24	nL	nH	
Decimal	27	36	nL	nH	

[Range] 0 ≤ nL ≤ 255
0 ≤ nH ≤ 255

[Description] Sets the distance from the beginning of the line to the position at which subsequent charac ters are to be printed.
The distance from the beginning of the line to the print position is [(nL + nH * 256) * (vertical or horizontal motion unit)] inches.

[Notes] • Settings outside the specified printable area are ignored.
• The horizontal and vertical motion unit are specified by **$1D $50.**
• **$1D $50** can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum horizontal movement amount.
• In standard mode, the horizontal motion unit (x) is used.
• If the setting is outside the printing area width, it sets the absolute print position, but the left or right margin is set at default value.

[Default]

[Reference] **$1B $5C, $1D $50**

[Example]

$1B $28 $76 nL nH

[Name] **Set relative vertical print position**

[Format]

ASCII	ESC	(	v	nL	nH
Hex	1B	28	76	nL	nH
Decimal	27	10	118	nL	nH

[Range] 0 ≤ nL ≤ 255
0 ≤ nH ≤ 255

[Description] Sets the print vertical position based on the current position by using the horizontal or verti cal motion unit.
• This command sets the distance from the current position to [(nL+ nH * 256) * (horizontal or vertical motion unit)].

[Notes] • When the starting position is specified by N motion unit to the bottom:

nL + nH * 256=N

When the starting position is specified by N motion unit to the top (negative direction), use the complement of 65536:

nL + nH * 256=65536 - N

• The horizontal and vertical motion unit are specified by **$1D $50.**
• **$1D $50** can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum horizontal movement amount.
• In standard mode, the horizontal motion unit (x) is used.

[Reference] **$1B $50**
[Example]

$1B $2D n

[Name] **Turn underline mode on/off**

[Format]				
	ASCII	ESC	-	n
	Hex	1B	2D	n
	Decimal	27	45	n

[Range] 0 ≤ n ≤ 2, 48 ≤ n ≤ 50
[Description] Turns underline mode on or off, based on the following values of n:

n = 0, 48	Turns off underline mode
n = 1, 49	Turns on underline mode (1-dot thick)
n = 2, 50	Turns on underline mode (2-dot thick)

[Notes] • The printer can underline all characters, but cannot underline the space set by **$09** and right-side character spacing.
• The printer cannot underline 90° rotated characters and white/black inverted characters.
• When underline mode is turned off by setting the value of n to 0 or 48, the data which fol lows is not underlined.
• Underline mode can also be turned on or off by using **$1B $21**. Note, however, that the last received command is the effective one.
[Default] n=0
[Reference] **$1B $21**
[Example]

$1B $30

[Name] **Select 1/8-inch line spacing**

[Format]			
	ASCII	ESC	0
	Hex	1B	30
	Decimal	27	48

[Description] Selects 1/8-inch line spacing
[Notes]
[Default]
[Reference] **$1B $32, $1B $33**
[Example]

$1B $32

[Name] **Select 1/6-inch line spacing**

[Format]			
	ASCII	ESC	2
	Hex	1B	32
	Decimal	27	50

[Description] Selects 1/6-inch line spacing.

[Notes]
[Default]
[Reference] **$1B $30, $1B $33**
[Example]

$1B $33 n

[Name] **Set line spacing**

[Format]

ASCII	ESC	3	n
Hex	1B	33	n
Decimal	27	51	n

[Range] 0 ≤ n ≤ 255
[Description] Sets line spacing to [n * (vertical or horizontal motion unit)] inches.
[Notes]
• The horizontal and vertical motion unit are specified by **$1D $50**. Changing the horizontal or vertical motion unit does not affect the current line spacing.
• The **$1D $50** command can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum vertical movement amount.
• In standard mode, the vertical motion unit is used.
• The maximum line spacing is n = 255 (≈ 32mm).
[Default] n = 32 (1/6 inch)
[Reference] **$1B $30, $1B $32, $1D $50**
[Example]

$1B $34 n

[Name] **Set/reset italic mode**

[Format]

ASCII	ESC	4	n
Hex	1B	34	n
Decimal	27	52	n

[Range] 0 ≤ n ≤ 1, 48 ≤ n ≤ 49
[Description] Turns italic mode on or off, based on the following values of n:

n	Function
0, 48	Turns off italic mode
1, 49	Turns on italic mode

[Notes]
• The printer can print any character in italic mode.
• When italic mode is turned off by setting the value of n to 0 or 48, the data which follows is printed in normal mode.
• Italic mode can also be turned on or off using **$1B $21**. Note, however, that the last received command is the effective one.
[Default] n = 0
[Reference] **$1B $21**
[Example]

$1B $3D n

[Name] **Select device**

[Format]

ASCII	ESC	=	n
Hex	1B	3D	n
Decimal	27	61	n

[Range] 0 ≤ n ≤ 255

[Description] Select the device to which the host computer sends data, using n as follows:

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Printer disabled
	On	01	1	Printer enabled [DEFAULT]

[Notes] • When the printer is disabled, it ignores all transmitted data until the printer is enabled through this command.
[Default] n = 1
[Reference]
[Example]

$1B $40

[Name] **Initialize printer**

[Format]			
	ASCII	ESC	@
	Hex	1B	40
	Decimal	27	64

[Description] Clears the data in the print buffer and resets the printer mode to that in effect when power was turned on.
[Notes] • The data in the receiver buffer is not cleared.
[Default]
[Reference]
[Example]

$1B $44 [n1...nk] $00

[Name] Set horizontal tab positions

[Format]					
	ASCII	ESC	D	n1...nk	NUL
	Hex	1B	44	n1...nk	00
	Decimal	27	68	n1...nk	0

[Range] 1 ≤ n ≤ 255
0 ≤ k ≤ 32
[Description] Sets horizontal tab positions
• n specifies the column number for setting a horizontal tab position calculated from the be ginning of the line.
• k indicates the total number of horizontal tab positions to be set.
[Notes] • The horizontal tab position is stored as a value of [character width x n] measured from the beginning of the line. The character width includes the right-side character spacing and dou ble-width characters are set with twice the width of normal characters.
• This command cancels previous tab settings.
• When setting n = 8, the print position is moved to column 9, by sending **$09.**
• Up to 32 tab positions (k = 32) can be set. Data exceeding 32 tab positions is processed as normal data.
• Send [n] k in ascending order and place a 0 NUL code at the end. When [n] k is less than or equal to the preceding value [n] k-1, the setting is complete and the data which follows is processed as normal data.
• **$1B $44 $00** cancels all horizontal tab positions.
• The previously specified horizontal tab position does not change, even if the character width is modified.
[Default] Default tab positions are set at intervals of 8 characters (columns 9, 17, 25, …) when the right-side character spacing is 0.
[Reference] **$09**
[Example]

$1B $45 n

[Name] Select **emphasized mode**

[Format]

ASCII	ESC	E	n
Hex	1B	45	n
Decimal	27	69	n

[Range] 0 ≤ n ≤ 255

[Description] Turns emphasized mode on/off.
- When the LSB of n is 0, the emphasized mode is off.
- When the LSB of n is 1, the emphasized mode is on.

[Notes]
- Only the LSB of n is effective.
- **$1B $21** also turns on and off the emphasized mode. However, the last received command is the effective one.

[Default] n = 0

[Reference] **$1B $21**

[Example]

$1B $47 n

[Name] Select **double-strike mode**

[Format]

ASCII	ESC	G	n
Hex	1B	47	n
Decimal	27	71	n

[Range] 0 ≤ n ≤ 255

[Description] Turns double-strike mode on or off.
- When the LSB of n is 0, the double-strike mode is off.
- When the LSB of n is 1, the double-strike mode is on.

[Notes]
- Only the LSB of n is effective.
- Printer output is the same in double-strike and emphasized mode.

[Default] n = 0

[Reference] **$1B $45**

[Example]

$1B $4A n

[Name] **Print and paper feed**

[Format]

ASCII	ESC	J	n
Hex	1B	4A	n
Decimal	27	74	n

[Range] 0 ≤ n ≤ 255

[Description] Prints the data in the print buffer and feeds the paper [n * (vertical or horizontal motion unit)] inches.

[Notes]
- After printing has been completed, this command sets the print starting position to the be ginning of the line.
- The paper feed amount set by this command does not affect the values set by **$1B $32** or **$1B $33**.
- The horizontal and vertical motion units are specified by **$1D $50.**
- **$1D $50** can change the vertical (and horizontal) motion unit. However, the value cannot be less than the minimum vertical movement amount.
- In standard mode, the vertical motion unit is used.
- The maximum paper feed amount is 31.8 mm.

[Default]

[Reference] **$1D $50**

[Example]

$1B $52 n

[Name] **Select international character set**

[Format]

ASCII	ESC	R	n
Hex	1B	52	n
Decimal	27	82	n

[Range] 0 ≤ n ≤ 10

[Description] Selects the international character set n according to the table below:

	Hex	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
n	Character set												
0	U.S.A.	#	$	@	[	\	]	^	`	{	|	}	~
1	France	#	$	à	°	ç	§	^	`	é	ù	è	“
2	Germany	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	b
3	United Kingdom	£	$	@	[	\	]	^	`	{	|	}	~
4	Denmark I	#	$	@	Æ	Æ	Å	^	`	æ	f	å	~
5	Sweden	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
6	Italy	#	$	@	°	\	é	^	ù	à	ò	è	ì
7	Spain 1	Pt	$	@	i	Ñ	¿	^	`	“	ñ	}	~
8	Japan	#	$	@	[	¥	]	^	`	{	|	}	~
9	Norway	#	¤	É	Æ	Æ	Å	Ü	é	æ	f	å	ü
10	Denmark II	#	$	É	Æ	Æ	Å	Ü	é	æ	f	å	ü

[Default] n = 0

[Reference]

[Example]

$1B $57

[Name] **Prints a graphic line**

[Format]

ASCII	ESC	W
Hex	1B	57
Decimal	27	87

[Range] 0 ≤ n ≤ 255

[Description] Receives 48 byte from serial port and prints them in graphic mode.

[Notes]
- When underline mode is turned on, the printer cannot underline 90° rotated characters. All the same it’s possible select the underline mode.

[Default] n = 0

[Reference] **$1B $45**

[Example] To print a dotted graphic line, transmit 48 bytes with value 240 (Hex: F0) after the command **$1B $57.**
To print a continuous graphic line, transmit 48 bytes with value 255 (Hex: FF)**.**

$1B $5C nL nH

[Name] **Set relative print position**

[Format]

ASCII	ESC	\	nL	nH
Hex	1B	5C	nL	nH
Decimal	27	92	nL	nH

[Range] 0 ≤ nL ≤ 255
0 ≤ nH ≤ 255

[Description] Sets the print starting position based on the current position by using the horizontal or vertical motion unit.
Sets the distance from the current position to [(nL+ nH * 256) * (horizontal or vertical motion unit)].

[Notes]
• Any setting that exceeds the printable area is ignored.
• When the starting position is specified by n motion units to the right:

nL + nH * 256 = n

When the starting position is specified by n motion units to the left (negative direction), use the complement of 65536:

nL + nH * 256 = 65536 – n

• If setting exceeds the printing area width, the left or right margin is set to the default value.
• The horizontal and vertical motion unit are specified by **$1D $50**.
• **$1D $50** can change the horizontal (and vertical) motion units. However, the value cannot be less than the minimum horizontal movement amount.
• In standard mode, the horizontal motion unit is used.

[Default]
[Reference] **$1B $24, $1D $50**
[Example]

$1B $61 n

[Name] **Select justification**

[Format]

ASCII	ESC	a	n
Hex	1B	61	n
Decimal	27	97	n

[Range] 0 ≤ n ≤ 2, 48 ≤ n ≤ 50

[Description] Aligns all data in one line to the specified position.
n selects the type of justification as follows:

n	Justification
0, 48	Flush left
1, 49	Centered
2, 50	Flush right

[Notes]
• This command is only enabled when inserted at the beginning of a line.
• Lines are justified within the specified printing area.
• Spaces set by **$09, $1B $24** and **$1B $5C** will be justified according to the previously-entered mode.

[Default] n = 0
[Reference]
[Example]

Flush left

ABC
ABCD
ABCDE

Centered

ABC
ABCD
ABCDE

Flush right

ABC
ABCD
ABCDE

$1B $64 n

[Name] **Print and feed paper n rows**

[Format]

ASCII	ESC	d	n
Hex	1B	64	n
Decimal	27	100	n

[Range] 0 ≤ n ≤ 255

[Description] Prints the data in the print buffer and feeds the paper n rows.

[Notes]
- Sets the print starting position at the beginning of the line.
- This command does not affect the line spacing set by **$1B $32** or **$1B $33**.
- The maximum paper feed amount is 200 rows. Even if a paper feed amount of more than 200 rows is set, the printer feeds the paper only 200 rows.

[Default]

[Reference] **$1B $32**, **$1B $33**

[Example]

$1B $72 n

[Name] **Set/reset red printing mode**

[Format]

ASCII	ESC	r	n
Hex	1B	72	n
Decimal	27	114	n

[Range] 0 ≤ n ≤ 1, 48 ≤ n ≤ 49

[Description] Sets and resets red printing mode.

n	Function
0, 48	Reset red printing mode
1, 49	Set red printing mode

[Notes]
- The printer prints only entire lines in red, not individual characters.
- The printer prints red only if enabled (see Setup).

[Default] n = 0

[Reference]

[Example]

$1B $74 n

[Name] Select character code table

[Format]

ASCII	ESC	t	n
Hex	1B	74	n
Decimal	27	116	n

[Range] n = 0, 255

[Description] Selects a page n from the character code table, as follows:

n	Page
0	ASCII Standard, International
255	Space page from $00 to $7F ASCII Standard, international from $80 to $FF “SPACE [$20]“

[Notes]

[Default] n = 0

[Reference]

[Example]

$1B $76

[Name] **Transmit paper sensor status**

[Format]

ASCII	ESC	v
Hex	1B	76
Decimal	27	118

[Description] When this command is received, transmit the current status of the paper sensor. The status to be transmitted is shown in the table below:

Bit	Off/On	Hex	Decimal	Function
0,1	-	-	-	RESERVED
2,3	Off	00	0	Paper-end sensor: Paper present
	On	0C	12	Paper-end sensor: Paper not present
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	-	-	-	RESERVED
7	-	-	-	RESERVED

[Notes] • This command is executed immediately, even when the data buffer is full (Busy).

[Default]

[Reference] **$10 $04**

[Example]

$1B $78 n

[Name] **Selects speed/current mode**

[Format]

ASCII	ESC	x	n
Hex	1B	78	n
Decimal	27	120	n

[Range] 0 ≤ n ≤ 2

[Description] Selects printing speed/current mode.
N selects the printing speed as follows:

N	Speed/Current
0	Low speed, low current
1	Normal mode
2	High speed, high current

[Notes]

[Default] n = 0

[Reference]

[Example]

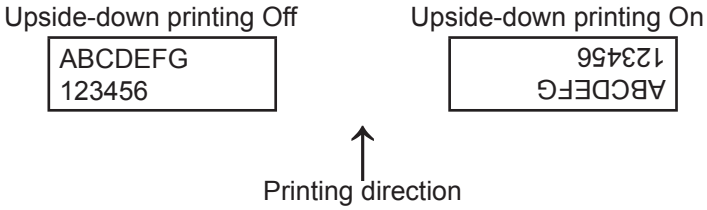
$1B $7B n

[Name] **Set/cancel upside-down character printing**

[Format]

ASCII	ESC	{	n
Hex	1B	7B	n
Decimal	27	123	n

[Range] 0 ≤ n ≤ 255
[Description] Turns upside-down printing mode on or off.
• When the LSB of n is 0, the upside-down printing mode is off.
• When the LSB of n is 1, the upside-down printing mode is on.
[Notes] • Only the LSB of n is effective.
• This command is valid only if entered at the beginning of a line.
• In upside-down printing mode, the printer rotates the line to be printed 180° and then prints it.
[Default] n = 0
[Reference]
[Example]



$1B $FA n xH xL yH yL

[Name] **Print logo (384x85 dots).**

[Format]							
ASCII	ESC	·	n	xH	xL	yH	yL
Hex	1B	FA	n	xH	xL	yH	yL
Decimal	27	250	n	xH	xL	yH	yL

[Range] 0 ≤ n ≤ 1
0 ≤ xH, xL, yH, yL ≤ 255
[Description] Prints graphic logo from flash. n selects the graphic source as follows:
xL + xH * 256 specifies the starting dotline (1 ¸ 85).
yL + yH * 256 specifies the number of lines to print.
[Notes] • If (xL + (xH * 256)) > 85 the printer does not execute the command.
• If (xL + (xH * 256) + yL +(yH * 256))> 85 the printer prints only 85 - xL + (xH * 256) +1 dotline.
[Default]
[Reference]
[Example] To print from ram bank dotline 10 to dotline 64, send:
1BH FAH 00H 00H 0AH 00H 40H

$1D $21 n

[Name] Select character size

[Format]			
ASCII	GS	!	n
Hex	1D	21	n
Decimal	29	33	n

[Range] 0 ≤ n ≤ 255
[Description] Selects character height and width, as follows:
• Bits 0 to 3 low Nibble: to select character height (see table 2).
• Bits 4 to 7 high Nibble: to select character width (see table 1).

0bit	1bit	2bit	3bit	4bit	5bit	6bit	7bit
Height				Width			

Table 1 Select Character Width (Hight Nibble)

Hex	Width
0x	1 (normal width = 1x)
1x	2 (width = 2x)
2x	3 (width = 4x)
3x-Fx	1 (normal width = 1x)

Table 2 Select character height (Low Nibble)

Hex	Height
x0	1 (normal height = 1x))
x1	2 (height = 2x)
x2	3 (height = 3x)
x3-xF	1 (normal height = 1x)

[Notes]
- This command is effective for all characters (except HRI characters).
- If n falls outside the defined range, this command is ignored.
- Characters enlarged to different heights on the same line are aligned at the baseline or topline (see **$1D $7E**).
- **$1B $21** can also be used to select character size. However, the setting of the last re ceived command is the effective one.

[Default] n = 0
[Reference] **$1B $21**
[Example]

$1D $42 n

[Name] **Turn white/black reverse printing mode on/off**
[Format]

ASCII	GS	B	n
Hex	1D	42	n
Decimal	29	66	n

[Range] 0 ≤ n ≤ 255
[Description] Turns white/black reverse printing mode on or off.
- When the LSB of n is 0, white/black reverse printing is turned off.
- When the LSB of n is 1, white/black reverse printing is turned on.

[Notes]
- Only the LSB di n is effective.
- This command is available for both built-in and user-defined characters.
- This command does not affect bit image, downloaded bit image, bar code, HRI characters and spacing skipped by **$09, $1B $24** and **$1B $5C**.
- This command does not affect white space between lines.
- White/black reverse mode has a higher priority than underline mode. Even if underline mode is on, it will be disabled (but not cancelled) when white/black reverse mode is selected.

[Default] n = 0
[Reference]
[Example]

$1D $49 n

[Name] **Transmit printer ID**
[Format]

ASCII	GS	I	n
Hex	1D	49	n
Decimal	29	73	n

[Range] 1 ≤ n ≤ 3, 49 ≤ n ≤ 51
[Description] Transmits the printer ID specified by n follows:

n	Printer ID	Specification
1, 49	Printer model ID	$86 (TG02)
2, 50	Type ID	See table below
3, 51	ROM version ID	Depends on ROM version (4 character)

n = 2, Type ID

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	2-byte character codes not supported
1	Off	00	0	Autocutter not supplied
	On	02	2	Autocutter supplied
2	Off	00	0	Thermal paper w/o label
	On	04	4	Thermal paper w/label
3	-	-	-	RESERVED
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	-	-	-	RESERVED
7	-	-	-	RESERVED

[Notes] • This command is executed when the data is processed in the data buffer. Therefore, there could be a time lag between command reception and data transmission, depending on data buffer status.

[Default]

[Reference]

[Example]

$1D $4C nL nH

[Name] **Set left margin**

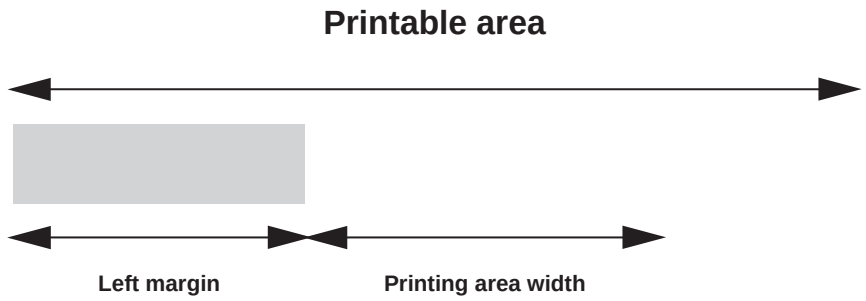
[Format]

ASCII	GS	L	nL	nH
Hex	1D	4C	nL	nH
Decimal	29	76	nL	nH

[Range] 0 ≤ nL, nH ≤ 255

[Description] Sets the left margin.

• The left margin is set to [(nL + nH * 256) * (horizontal motion unit)] inches.



[Notes] • This command is enabled only if set at the beginning of the line.
• If the setting exceeds the printable area, the maximum value of the printable area is used.
• If the left margin + printing area width is greater than the printable area, the printing area width is set at maximum value.
• The horizontal and vertical motion unit are specified by **$1D $50**.
Changing the horizontal or vertical motion unit does not affect the current left margin.

• The **$1D $50** command can change the horizontal (and vertical) motion unit.
• However, the value cannot be less than the minimum horizontal movement amount and it must be in even units of the minimum horizontal movement amount.

[Default] If font A : nL = nH = 0
If font B : nL = 14 nH = 0

[Reference] **$1D $50, $1D $57**

[Example]

$1D $50 x y

[Name] **Set horizontal and vertical motion units**

[Format]

ASCII	GS	P	x	y
Hex	1D	50	x	y
Decimal	29	80	x	y

[Range] x = 100, 200
y = 100, 200

[Description] Sets the horizontal and vertical motion units to 1/x inch and 1/y inch respectively.
When x is set to 0, the default setting value is used.
When y is set to 0, the default setting value is used.

[Notes]
• The horizontal direction is perpendicular to the paper feed direction.
• In standard mode, the following commands use x or y, regardless of character rotation (upside-down or 90° clockwise rotation):
① Commands using x: **$1B $20, $1B $24, $1B $5C, $1D $4C, $1D$57.**
② Commands using y: **$1B $33, $1B $4A**.
• This command does not affect the previously specified values.
• The calculated result from combining this command with others is truncated to the mini mum value of the mechanical pitch or an exact multiple of that value.

[Default] x = 200, y = 200

[Reference] **$1B $20, $1B $24, $1B $5C, $1B $33, $1B $4A, $1D $4C, $1D$57**

[Example]

$1D $57 nL nH

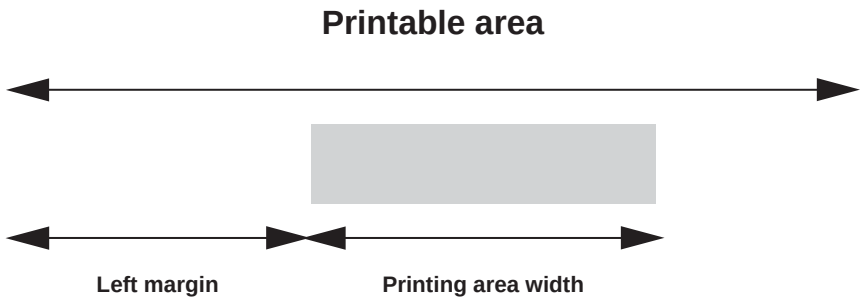
[Name] **Set printing area width**

[Format]

ASCII	GS	W	nL	nH
Hex	1D	57	nL	nH
Decimal	29	87	nL	nH

[Range] 0 ≤ nL, nH ≤ 255

[Description] Sets the printing area width to the area specified by nL and nH.
• The left margin is set to [(nL + nH * 256) * (horizontal motion unit)] inches.



[Notes] • This command is only enabled if set at the beginning of the line.

• If the right margin is greater than the printable area, the printing area width is set at maxi mum value.
• If the printing area width = 0, it is set at the maximum value.
• The horizontal and vertical motion units are specified by **$1D $50.** Changing the horizontal or vertical motion unit does not affect the current left margin.
• The **$1D $50** command can change the horizontal (and vertical) motion unit.
• However, the value cannot be less than the minimum horizontal movement amount and it must be in even units of the minimum horizontal movement amount.

[Default] If font A : nL = 192 nH = 1
If font B : nL = 164 nH = 1
[Reference] **$1D $4C, $1D $50**
[Example]

$1D $59 n

[Name] **Sets height in printing.**
[Format]

ASCII	GS	Y	n
Hex	1D	59	n
Decimal	29	89	n

[Description] Sets height during printing based on following values of n:

When you print a dot line if
n = 0 height is set to one
n ≠ 0 (default value) height is set to two

When n ≠ 0 (default value) each dotline is twice replicated

[Default] n ≠ 0
[Reference]
[Example]

$1D $5A n

[Name] **Receive n bytes from serial port**
[Format]

ASCII	GS	Z	n
Hex	1D	5A	n
Decimal	27	90	n

[Description] Receives n bytes from serial port and prints them in graphic mode
[Notes] • Max value of n is 58.
[Default]
[Reference]
[Example]

$1D $72 n

[Name] **Transmit status**
[Format]

ASCII	GS	r	n
Hex	1D	72	n
Decimal	29	114	n

[Range] n = 1, 2, 49, 50
[Description] Transmits the status specified by n as follows:

n	Function
1, 49	Transmits paper sensor status (as for **$1B $76**).
2, 50	Transmits connector drawer status.

Paper sensor status (n = 1, 49)

Bit	Off/On	Hex	Decimal	Function
0,1	-	-	-	RESERVED
2,3	Off	00	0	Paper-end sensor (paper present)
	On	0C	12	Paper-end sensor (paper not present)
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	-	-	-	RESERVED
7	-	-	-	RESERVED

Connector drawer status (n = 2, 50)

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Pin 3 low level
	On	01	1	Pin 3 high level
1	-	-	-	RESERVED
2	-	-	-	RESERVED
3	-	-	-	RESERVED
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	-	-	-	RESERVED
7	-	-	-	RESERVED

[Notes] • This command is executed when the data is processed in the data buffer. Therefore, there may be a time lag between receiving the command and transmitting the status, depending on data buffer status.
[Default]
[Reference] **$10 $04, $1B $76**
[Example]

$1D $7C n

[Name] **Set printing density**
[Format]

ASCII	GS	|	n
Hex	1D	7C	n
Decimal	29	124	n

[Range] 0 ≤ n ≤ 12, 48 ≤ n ≤ 57, 65 ≤ n ≤ 67

[Description] Sets printing density.
n specifies printing density as follows:

n	Printing density
0, 48	- 50%
1, 49	- 37.5%
2, 50	- 25%
3, 51	- 12.5%
4, 52	Normal
5, 53	+ 12.5%
6, 54	+ 25%
7, 55	+ 37.5%
8,56	+ 50%
9,57	+ 62.5%
10,65	+ 75%
11,66	+ 87.5%
12,67	+100%

[Notes] • Printing density reverts to the default value when the printer is reset or turned off.
[Default] n = 4
[Reference]
[Example]

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4.1 TECHNICAL SPECIFICATIONS

Table 4.1 gives the main technical specifications of the printer.

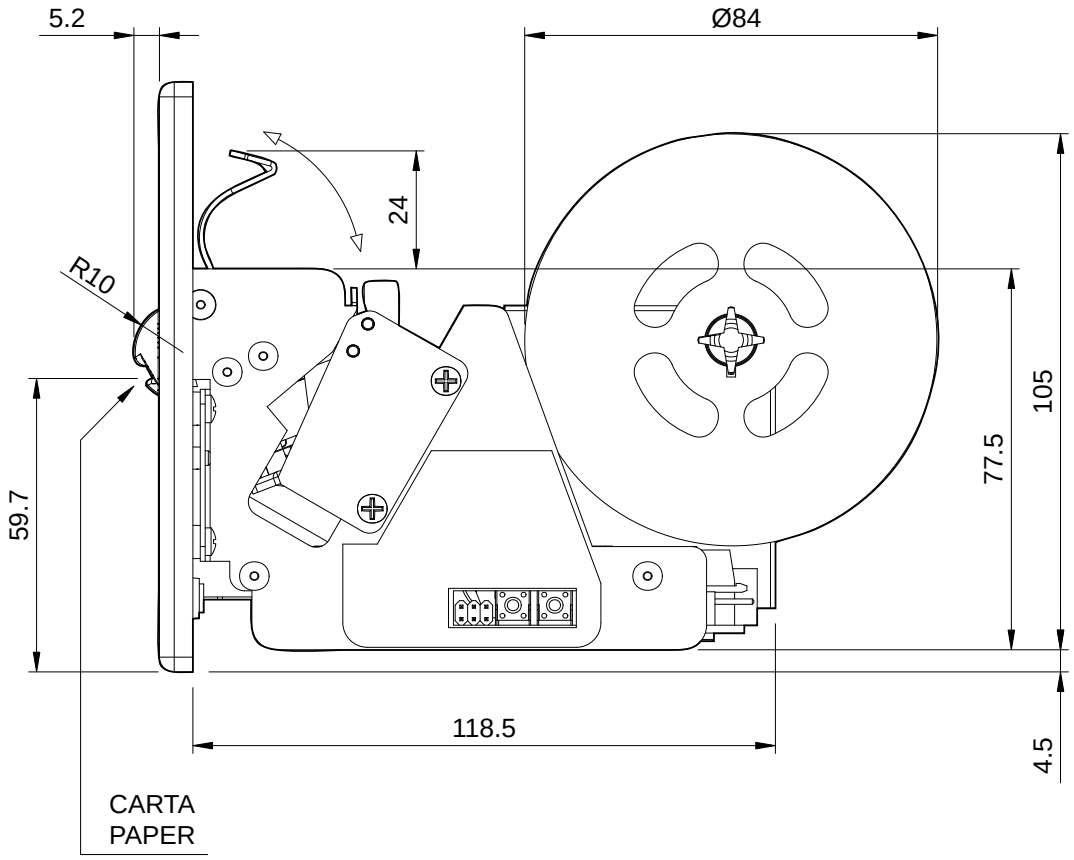
(Tab.4.1)

Resolution	203 DPI (8 dot/mm)
Paper specifications	
Type of paper	Thermal rolls. Heat-sensitive side on outside of roll
Recommended types of paper	from 55 g/m^2 to 60 g/m^2 (KANZAN KF50, MITSUBISHI PG5075, KOHELER KT55HS)
Width	57 mm, 35mm
Internal roll core diameter	12 mm
External roll diameter	max Ø70 mm
Core type	Cardboard or plastic
Printing speed	30 mm/sec.
Paper feed speed	70 mm/sec.
Sensors	Head temperature, ticket presence, jamming
Printing mode	Straight, Upside down
Printing format	Height 1x, 2x, 3x / Width 1x, 2x, 4x bold, reverse, underlined, italic.
Character fonts	ASCII Standard, International
Standard interfaces	RS232 Serial, TTL Serial
Baud rate	From 1200 to 38.400 bps
Receive buffer	128 Kbytes
Graphics memory	1 logo of 384 x 85 dots
Printing Driver	Windows™ 2K, 2K3, XP
Dimensions	Widht [mm] =100 Height [mm] =120 Length [mm] =165
Weight	400 gr.
Power supply	12 Vdc ± 10% (optional external power supply)
Absorption (current setting = Normal)	
Stand-by	150 mA
Medium (50% dot ON)	1,5 A
Environmental conditions	
Operating temperature	0°C - 50°C
Relative humidity	10% - 85% w/o condensation
Storage temperature / Humidity	-20°C - 70°C / 10% - 90%
OPTIONS	RS232 cable adaptation
Emulation	ESC/POS™
Character	
Normal	1x1,5
Number of columns	
35mm model	17
58mm model	24

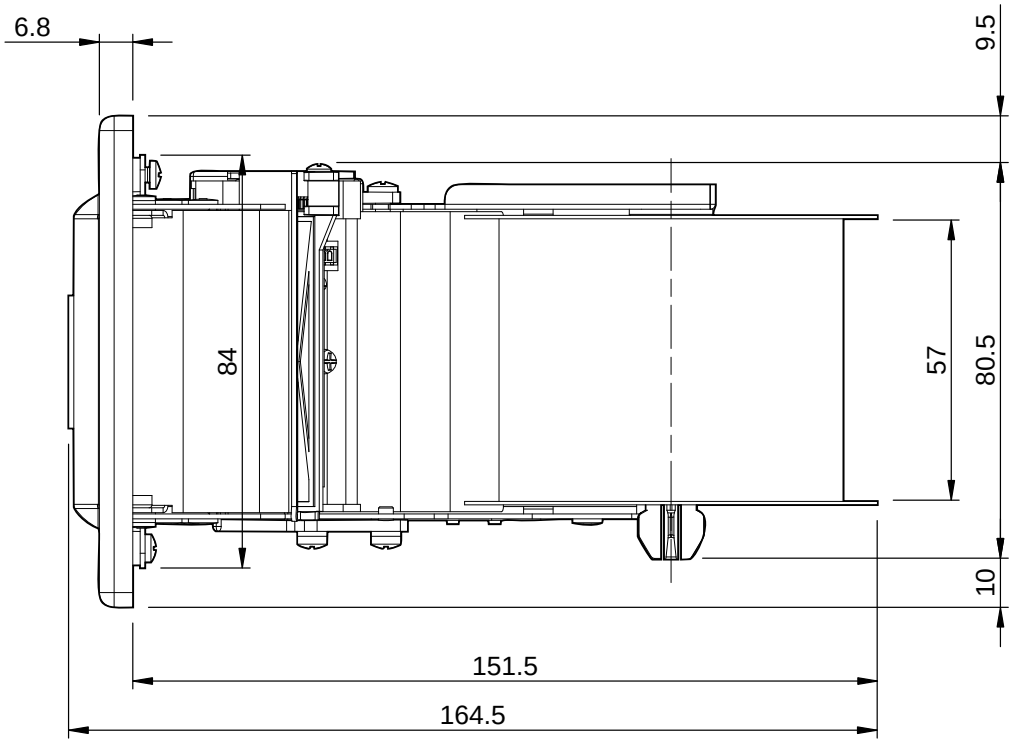
4.2 DIMENSIONS

The follwing figure illustrates the overall dimensions for the printer.

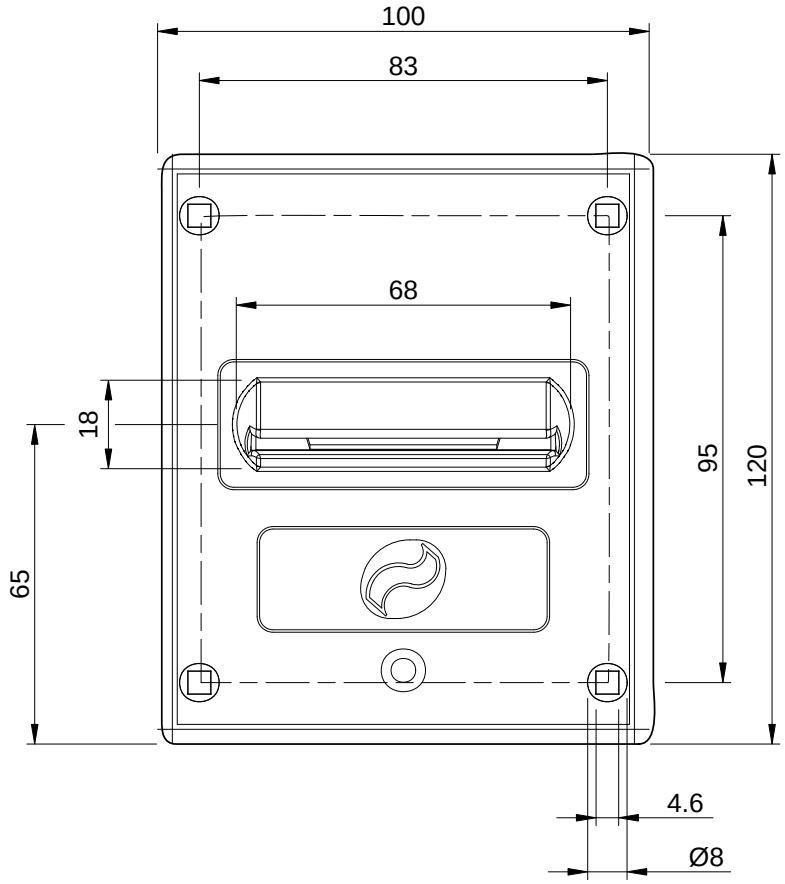
Side view
(Fig. 4.1)



Top view
(Fig. 4.2)



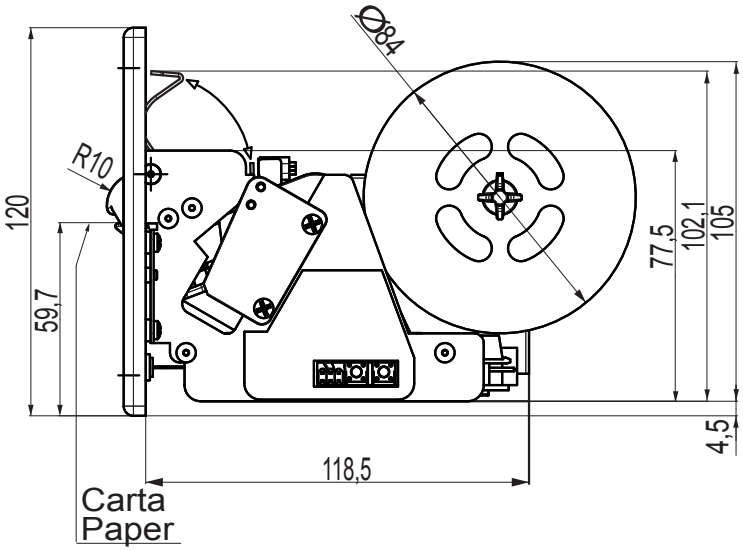
Front view
(Fig. 4.3)



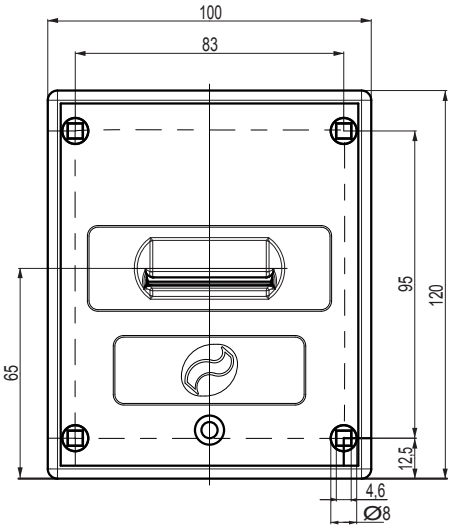
NOTE
In the following page are indicated the overall dimensions for the printer with 35mm paper width.

In the following figures are showed the printer overall dimensions with 35mm paper width.

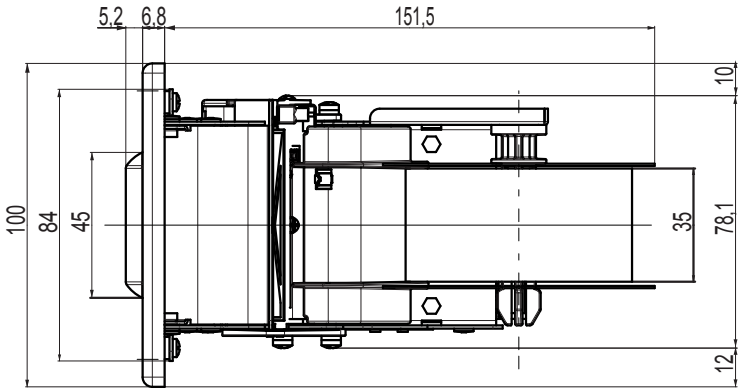
Side view (Fig. 4.4)



Front view (Fig. 4.5)



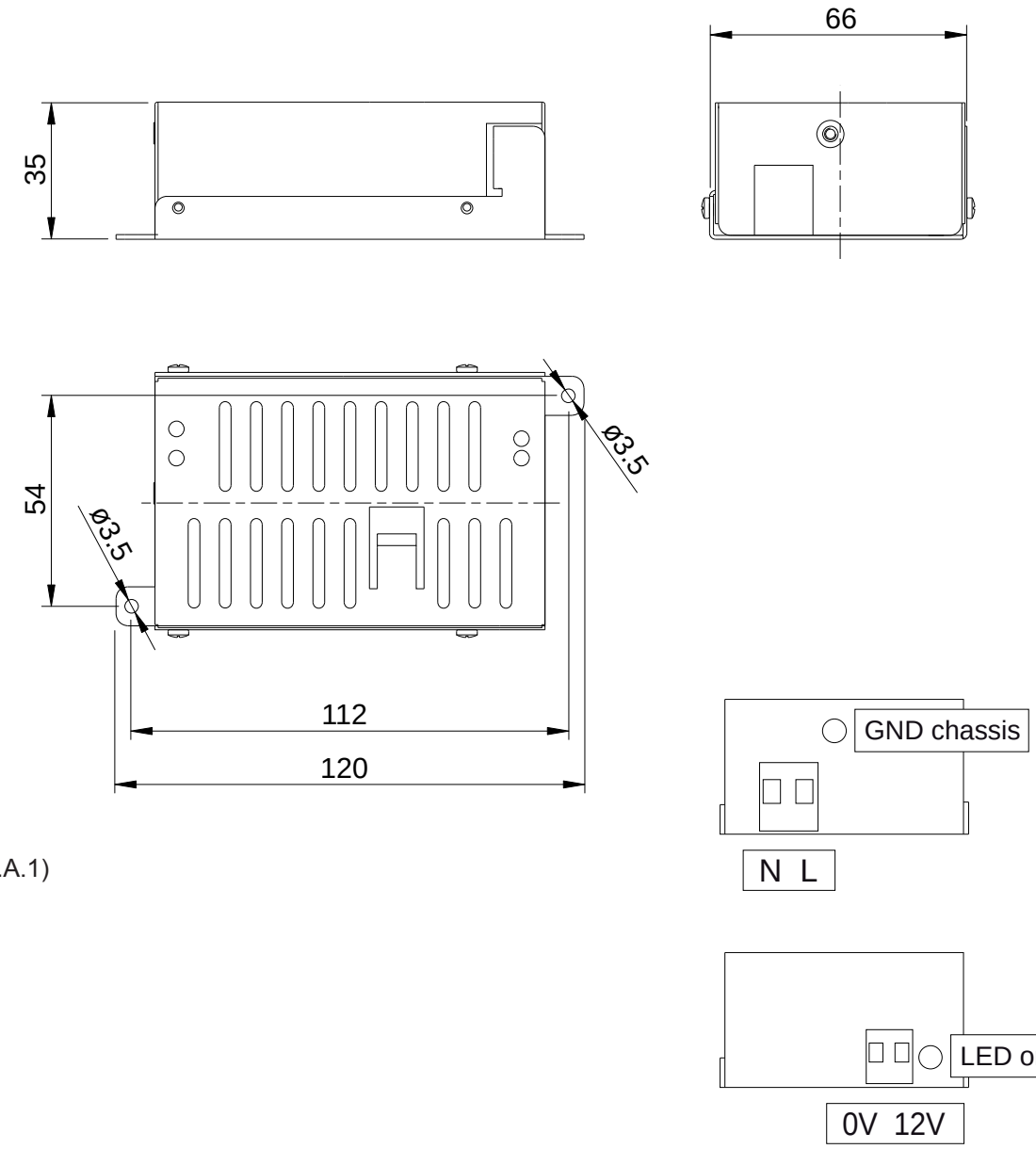
Top view (Fig. 4.6)



A.1 ACCESSORIES

A.1.1 Power supply

The following figure shows the 12V power supply, manufactured by Custom Engineering, that can be used to operate the printer.



(Fig.A.1)

(Tab.A.1)

PPSPS-050-12	Switching power supply 12V 50W	
Input specifications	Input voltage	100Vac ÷ 240Vac
	Input frequency	50Hz ÷ 60Hz
Output specifications	Output voltage	12V
	Output current (maximum)	4 A
	Output current (peak)	6 A
	Output current (short circuit)	6 A

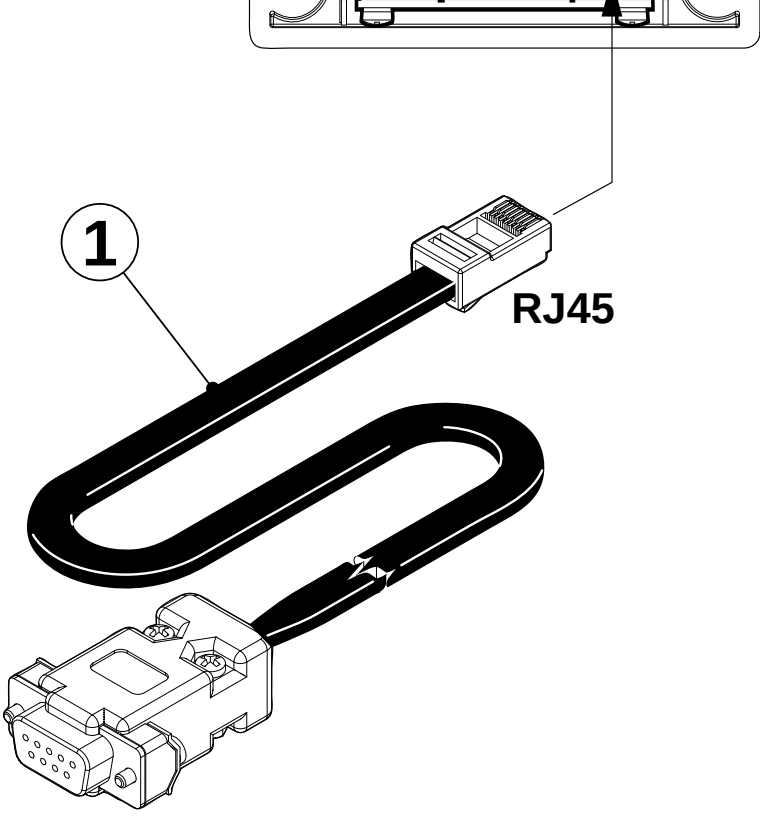
A.1.2 RS232 cable adaptation

There is an optional RS232 cable adapatation available for the printer that consists in a double connection system (1) (fig. A.2). On one side is a 9-pin female connector for the serial port; on the other side of the same cable is a RJ45 connector.

CBTG35-RS232	RS232 cable adaptation 150cm

To connect the printer with the RS232 interface use this connection cable and proceed as follows:

- connect the cable RJ45 connector to the J9 connector located at the back of the printer (see fig. A.2);
- connect the 9-pin female connector (fig. A.2) to the serial port.



(Fig.A.2)

For the layout of signals on the connectors, please refer to tables A.2 and A.3.

RJ45 cable connector (fig. A.2)

PIN	SIGNAL	DESCRIPTION	IN / OUT
1	VCC	+ 5V	OUT
2	GND	GROUND	-
3	TXD	DATA TRANSMISSION	OUT
4	RXD	DATA RECEPTION	IN
5	RTS	READY TO SEND	OUT
6	+VIN	+ 12V	OUT
7	NC	NOT CONNECTED	-
8	NC	NOT CONNECTED	-

(Tab.A.2)

9-pin female cable connector (fig. A.2)

PIN	SIGNAL PRINTER	DESCRIPTION	IN/OUT	SIGNAL HOST SIDE
1	DCD	Data Carrier detect Printer On (active at RS232 level high)	OUT	DCD
2	TX	Data Transmission Serial output (Printer side)	OUT	RX
3	RX	Data Reception Serial input (Printer side)	IN	TX
4	N.C.	Not connected	-	N.C.
5	GND	Ground	-	GND
6	DTR	Data Terminal Ready. Printer on and functioning (active at RS232 level hig)	OUT	DSR
7	N.C.	Not connected	-	N.C.
8	RTS	Ready to send. Ready for data transmission (active at RS232 level high)	OUT	CTS
9	N.C.	Not connected	-	N.C.

(Tab.A.3)

NOTE
In the tables A.2 and A.3 DESCRIPTION and IN/OUT columns always are related to signal printer

A.2 SPARE PARTS

RCT57X70-RS	Thermal roll paper at 57mm ø70mm

RCT35X70-RS	Thermal roll paper at 35mm ø70mm

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Part Number : DOME-TG02 Rev. 1.20

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